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ABSTRACT

This study focused on the development of policy thought, or abstract thinking about policy issues. Political thought may be described as concrete thinking about political phenomena. It includes one's knowledge of and attitude toward objects, people, and events in the political sphere. Policy thought entails the abstract manner in which one conceptualizes and approaches policy issues. Policy thought necessarily encompasses political thought. Political thought may be considered a necessary but insufficient basis for policy thought. The three purposes of this document are: (1) to provide a review of the research regarding the development of policy thought, including in-depth interviews with children and adolescents, the studies of specific aspects of formal operational thought, and the studies of the relationship between policy reasoning and other developmental theories; (2) to discuss the implications of the research for the development of children's policy thought; and (3) to offer suggestions for future research in the area of policy thought. The conclusions suggest that the development of policy thinking is related to age, that political interest seems to affect the level of policy reasoning, and that the development of policy thought appears to be related to other developmental models. A 57-item bibliography of references and three tables that compare various aspects of studies reviewed are included. (JB)

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Policy Thought Among Children and Adolescents: A Review of the Literature

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Policy Thought Among Children and Adolescents: A Review of the Literature

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Abstract

A society's capacity to reason about national and international issues influences the direction of its domestic and foreign policy. The manner in which citizens approach, conceptualize, and evaluate such issues is ultimately linked to the quality of the global environment. The central concern of the present study is the development of policy thought.

For the purpose of this paper, policy thought has been distinguished from political thought. Political thought may be described as concrete thinking about political phenomena; it includes one's knowledge of and attitude toward objects, persons, and events in the political sphere. Policy thought, however, entails the abstract manner in which one conceptualizes and approaches policy issues. Policy thought necessarily encompasses political thought. Political thought may be considered a necessary but insufficient basis for policy thought.

The primary focus of the paper, then, is on the development of abstract thinking about policy issues. The three general purposes of the paper may be delineated as follows:

1. *to provide a review of the research regarding the development of policy thought, including*
   a. *indepth interviews with children and adolescents,*
   b. *the studies of specific aspects of formal operational thought, and*
   c. *the studies of the relationship between policy reasoning and other developmental theories/stages;*
2. *to discuss the implications of the research for the development of children's policy thought; and*
3. *to offer suggestions for future research in the area of policy thought.*

Introduction

A society's capacity to reason about national and international issues influences the direction of its domestic and foreign policy. The manner in which citizens approach, conceptualize, and evaluate policy issues is ultimately linked to the quality of the global environment. The central concern of the present review is the development of policy thinking.

Since the term "policy thought" is not commonplace in social studies research and literature, the concept merits some discussion. It may be useful to begin by defining the object of policy thought. Lockwood (1975) distinguished between Kohlbergian moral dilemmas and public policy dilemmas. He stated that public policy dilemmas:

1. have a definite setting in time and space which is important in understanding the specific issues involved;
2. contain a mix of factual, moral and, occasionally, aesthetic questions;
3. involve individuals, groups, and institutions;
4. are factual or derived from historical events;
5. raise social issues of present events with which students have some familiarity;
6. often tap students' political party preferences or ideologies. (p. 51)

It might be added that the means by which such dilemmas are resolved generally have long-term consequences for the individuals, groups, and institutions involved. Such dilemmas often arise within the context of broader policy issues. The debate as to whether the United States should impose import quotas on Japanese automobiles is an example of such an issue.

It should also be noted that a "policy dilemma" in this context excludes some situations to which we might normally apply the term. For example, store owners may deliberate over the type of exchange policy they wish to have for returned merchandise. Such a policy dilemma would not ordinarily raise social issues or involve political ideologies, and hence would not fall within the parameters of our discussion. However, it should also be recognized that some issues we may not automatically associate with the political sphere, such as genetic engineering or experimentation with humans and vertebrates, would meet the criteria.

Policy thought, then, entails the abstract manner in which one conceptualizes and approaches policy issues. Merelman (1971) defined policy thinking as the "styles of cognition and evaluation employed when confronted with policy problems" (p. 1033). The various dimensions of policy thought may include cause-effect thought, role taking (Merelman, 1971), hypothetico-deductive thought (Johnston, 1983), conceptual integration (Neuman, 1981), and deductive reasoning (Sarat, 1975). In effect, the term "policy thought" serves to describe the abstract thinking processes involved in reflecting on policy issues.

The primary focus of this paper, then, is on the development of abstract thinking about policy issues. Political thought may be described as concrete thinking about political phenomena; it

includes one's knowledge of and attitude toward objects, persons, and events in the political sphere. Policy thought necessarily encompasses political thought. For example, to speculate as to the effects of a certain policy, say constructive engagement in South Africa, one must be able to differentiate among the persons and institutions involved. Political thought may be considered a necessary but insufficient basis for policy thought. We turn now to the relevant research in this domain.

Research on the Development of Policy Thought

Research on the development of policy thought generally falls into three broad categories. The first category consists of indepth interviews with children and adolescents; the emphasis is on describing the general quality of thought that tends to characterize particular age groups. The second category includes those studies designed to test the development of a particular aspect of formal operational thought, such as integration, and how it is applied to political or social policy issues. In both the first and second group of studies, age or grade level is the primary determinant of cognitive stage level. The third category is comprised of investigations of the relationship between stage of political policy reasoning development. All three approaches give us a better understanding of the nature of policy thought. The studies involving indepth interviews will be presented first, as they tend to give the reader a rich sense of the dimensions of policy thought.

Indepth Interviews with Children and Adolescents

The series of interviews conducted by Adelson and his colleagues (Adelson, 1971; Adelson, Green, & O'Neil, 1969; Adelson & O'Neil, 1966; Gallatin & Adelson, 1970, 1971) generally provided the seminal research on children's and adolescents' developing conceptions of the political sphere. The researchers examined students' perceptions of such abstract concepts as law, community, individual rights, and the public good by analyzing how they resolved hypothetical policy dilemmas.

The initial research (Adelson, Green, & O'Neil, 1969; Adelson & O'Neil, 1966) examined the growth of the idea of law and the sense of community, respectively. The studies were based on open-ended interviews with 120 adolescents, ages 11, 13, 15, and 18. The researchers presented the subjects with the following hypothetical situation:

> Imagine that a thousand people move to an island in the Pacific, and set about building a community de novo. They are confronted by the tasks of forming a government and developing laws and other modes of communal regulations. (Adelson et al., 1969, p. 327)

Based on the scenario, hypothetical laws and potential conflicts within the community were presented to the youth. For example, one controversial proposal within the community was to pass a law prohibiting smoking. Students were asked to consider such situations and give their opinions as to the best solutions.

In general, younger children's (ages 11 and 13) responses exemplified concrete thought in that they viewed the laws as either present or absent; they were incapable of abstract reasoning. They were significantly less likely than the older students to suggest revising or repealing an unpopular and unenforceable law. The older adolescents, on the other hand, differentiated between the institution of law and specific laws. While they understood the positive functions of the legal institution, they also understood that "law is a human product, and that men are fallible; hence law is to be treated in the same skeptical spirit we treat other human artifacts" (Adelson et al., 1969, p. 332). As such, older youth often suggested that a specific law should be amended. They considered the possible long-term consequences of proposed laws and hypothesized about alternative laws.

The same interviews also suggested the development of an increasingly complex conception of the relationship between the individual and the community (Adelson & O'Neil, 1966). In response to questions regarding hypothetical dilemmas that placed the individual in conflict with the community, older adolescents were able to "anticipate the consequences of a choice taken here and now for the long-range future of the community and weigh the probable effects of alternative choices on the future" (p. 299). In contrast, younger subjects had difficulty understanding the relationship between the individual and the community; they tended to view communal actions only in light of individual needs. The researchers interpreted their findings as follows:

> 'Government,' 'community,' 'society,' are abstract ideas; they connote those invisible networks of obligation and purpose which link people to each other in organized social interaction. These concepts are beyond the reach of 11-year-olds; in failing to grasp them they fall back to persons and actions of persons, which are the nearest equivalent of the tangible agencies and ephemeral processes they are trying to imagine. (pp. 297-298)

Thus, the younger adolescent's responses were characterized by concrete examples and a concern for the immediate. It appears that with age, adolescents develop the ability to look at the community as a whole and their predominantly egocentric orientations significantly diminish.

The same interview format was used in a cross-national study of 330 American, British, and West German youth between the ages of 11 and 18. Three reports of the interviews focused on different aspects of political issues.

Two of the studies (Gallatin & Adelson 1970, 1971) examined students' perceptions of conflicts between individual rights and the public good. Subjects were asked to evaluate a potentially intrusive law and discern the limits of individual liberties and governmental safeguards (e.g., *Should a dissenting religious group be vaccinated?*).

The results supported the findings in previous studies. Younger children tended to view the law as absolute and inherently good; they were unlikely to view specific laws as unjust or impractical. Older youths recognized that a given law may involve unacceptable infringements on individual freedoms and specifically cited the principle as one which must be weighed in assessing the value of the law; the development of such abstract reasoning abilities was increasingly evident among older youth.

Gallatin and Adelson (1970) observed that the 13-year-old subjects generally failed to exhibit abstract reasoning abilities, in spite of the fact that Inhelder and Piaget (1967) had shown that the capacity for abstract thought is well established by this age.[1] The researchers suggested that the remoteness of the political sphere may create a lag between the development of formal thinking in face-to-face social situations and formal thinking in political reasoning.

These studies are particularly significant because they examined cross-national differences as well as developmental trends. Although variations in emphases among countries were evident (American, British, and West German children tended to stress the importance of communal goals, individual interest, and governmental authority, respectively), the developmental differences in conceptualizations of individual freedom were far more significant.

Adelson (1971) summarized the

results of the studies as well as the findings of a longitudinal sample of 50 adolescents from the three countries. One group was interviewed at 13 and then again at 15; the other group was initially interviewed at 15 and then at 18 years of age. The results suggested developmental trends in the youth's quality of thought, time perspective, mode of reasoning, and investment in politics.

In general, the younger adolescents' (ages 11 to 13) thought processes were limited to the concrete; Adelson (1971) notes: "The processes and institutions of society are personalized. When we ask him about the law, he speaks of the teacher, the principal, the student" (pp. 1015-1016). The older adolescent (ages 15 to 18), however, was capable of abstract thought processes. Adelson states, "He illuminates a principle with a concrete instance, or having mentioned specific examples, he seeks and finds the abstract category that binds them" (p. 1015). In addition, the older youth was capable of adopting a sociocentric perspective, thereby demonstrating an understanding of the functions of society.

The responses of the older adolescents were characterized by a significantly expanded time perspective; they were able to hypothesize about future consequences and alternatives, whereas the younger children's thought was limited to the present. Similarly, the younger child's mode of thought was generally intuitive; the older adolescent often used hypothetico-deductive thought when approaching political problems and issues.

Finally, Adelson examined the respondents' degree of cathexis, or attachment, to the political sphere. He noted an increasing investment in political matters as a function of age. The perceived distance between the adolescent and the political sphere gradually lessens.

> The various events of the adolescent experience accumulate and interact to move the child toward a cathexis of the political . . . the youngster's increased sense of autonomy, his anticipation of adulthood, his rehearsal of mature modes of self-definition, among which is the readiness for citizenship and with it the need to have opinions, make judgments, discourse on the world affairs. (Adelson, 1971, pp. 1030-1031)

By giving youth greater independence in their personal lives, the community prepares them to make decisions about social and political issues.

In all three studies, distinctive national qualities emerged in the interviews. Again, however, national differences were far less important than developmental trends.

Upon the conclusion of the cross-national project, the researchers embarked upon a similar study with urban youth from the Detroit area, specifically designed to look at possible differences between white and black students. In what has come to be known as the Urban Study (Gallatin, 1985), 453 students, sixth through twelfth grades, were interviewed according to a format similar to that used in the original research. The few racial variations that surfaced were relatively insignificant; national differences were greater than were racial differences, and developmental trends much more prominent than either of these two variables.

Connell (1971) conducted open-ended interviews with 119 Australian children age 5 to 16 to assess their understanding of political structures, parties, and ideologies. The extensive interviews suggested a change in the children's orientation to the political sphere at about age 9.

Connell describes this shift as follows:

> Up to about the age of 9, politics is not seen by the children as a problematic sphere of life in which sets of choices must be made between possible alternatives. Most of their statements of preferences are ad hoc, unqualified, probably highly unstable, and not necessarily consistent with each other. . . . This situation is transformed when the children begin to recognize political alternatives and notice opposing policy positions. They are then enabled to, and do, take positions on issues and develop consistent preferences of their own. At first . . . these preferences are specific to their subject-matter, and isolated from each other. Later they are linked together into coherent sets of opinions. From the combination of such interconnected stances with abstract and holistic interpretations, ideology may form. (pp. 231-232)

For Connell, then, policy thinking is a developmental construct; it initially connotes a perception of a dilemma, an evaluation of alternatives and consequences, and a choice among alternative policy positions. Later, it may be characterized by a consistency among policy preferences.

The conversations suggested that Piaget's theory of cognitive development is relevant to an understanding of children's developing constructions of the political world. Despite the fact that their political information is mediated by adults, Connell denied that children merely adopt the political beliefs of adults; rather, his research strongly suggests that children construct their own unique interpretations of the political sphere. He notes one pervasive exception: "the triangle of nationalism, anti-communism, and the threat schema . . . are leading themes effectively conveyed to the children and are adopted by most of them in a form which appears to be permanent" (p. 239). This phenomena acts to limit children's political imagination and stifles their ability to "generate plans of action to deal with the political problems they encounter" (p. 240).

Crain and Crain (1974) examined young persons' developing conceptions of the ideal society using an adapted version of the Adelson and O'Neil (1966) format. An interesting innovation in their method was the subjects' use of jacks to construct their society; the researchers suggest that this aspect of their study might force the youths to "call upon the most central components of their outlook--whether they be realistic consideration, principles, or whatever" (p. 108). The sample was comprised of 54 white males, ages 8, 11, and 16.

Based on their findings, Crain and Crain postulated the following typology of societal conceptions:

Type I. Concrete Personalists (primarily 8-year-olds). An ideal society consisting mainly of nongovernment, personally familiar things and people.

Type II. Discrete Structuralists (primarily 11-year-olds). A political view of politics, consisting of governmental institutions, but lacking interrelationships among them.

Type III. Systematic Structuralists (primarily 16-year-olds). A description of how instructions are interrelated to make society work.

Type IV. Idealists (a few 16-year-olds). A primary commitment to democratic principles. (pp. 110-111)

The sequence of differentiation and integration is similar to that proposed by Connell (1971). The possibility of a lag between logical and political cognitive development, also noted by Gallatin and Adelson (1970), is suggested here. Few of the 8-year-olds demonstrated concrete operational thought processes; the responses of the 11-year-olds yielded little evidence of formal operational thought processes.

In a later study, Crain and Crain (1976) used a similar format but focused on three specific political issues: the right to dissent, the importance of voting, and the distribution of wealth. Responses from the sample in the first study (1974) were combined with those from a group of 61 white children, ages 6 through 16. Questions such as the following were posed: "Could the people say bad things about the president or call him names?" "What's so important about voting?" and "Should rich people be required to give some of their money to poor people?"

The children's responses supported the developmental framework developed by Crain and Crain in their earlier study (1974). Younger children focused on respect for authority and immediate consequences (People vote to "get a president"); middle grade children recognized differing motives and perspectives ("If you don't vote, your man might not get in"); older students, albeit few, linked democratic principles to specific issues or dilemmas ("sovereignty of the people"). In general, the trends suggested by Adelson (1971) and Connell (1971) are reflected in the interviews.

Of all the indepth interviews conducted, the work of Torney and Brice (1979) is perhaps most relevant to the area of foreign policy thought. The researchers developed a series of hypothetical situations based on the rights delineated in the Universal Declaration of Human Rights. The sample consisted of 30 students from grades 4, 6, and 8. In the first of a two-part study, the children were asked to respond to questions such as:

> If people in another country decided it was alright to buy and sell people like slaves and they had no rules or laws against that, would that be right? If they passed a law that said that slavery was right, would it be right then? (p. 6)

Most of the students at all three grade levels responded negatively to the first question; they did not support violations of human rights in the absence of a law against it. However, when asked whether the human rights violations were allowable if the law explicitly stated so, many attempted to justify the law. For example, one fourth grade female responded, "Maybe, if they had a law saying slaves are equal, even if they are working for you. They should get the same food and clothes and all" (p. 7). Older students were more likely to question or reject the law, but all students seemed to have more difficulty responding to the second type of question.

Of particular interest in this study was the children's reasoning processes. Younger students' responses were characterized by a sense of personalism, a high regard for the "benevolent authority," and a concern for the immediate. In contrast, older students were more likely to take a societal perspective to criticize authority, and to demonstrate a concern for long-range consequences. Even when justifying an inhumane law, the older students were likely to use broad concepts such as the "popular will." Such characteristics are strikingly similar to those used by Adelson and his colleagues to describe the development of policy thought.

The second part of the study examined children's conceptions of human rights. Younger students (grades 4 and 6) offered concrete definitions of the term; a fourth grader stated, "The chance to do stuff, vote, drive a car, own a house, run a business--stuff like that" (p. 12). The contrast between this definition and the following eighth grader's response is striking: "Rights that all are able to have and so they like what they're doing in life. Live, do what they want, not have to do something, talk how they want" (p. 12). The transition from concrete to more abstract thought is readily apparent.

A second finding from this section of their research is particularly relevant to the study of foreign policy thinking: the students seemed to use the United States Constitution as the ideal standard for judging adherence to human rights. This stance remained unchanged even after the researchers had familiarized the students with the Universal Declaration of Human Rights. Torney and Brice attribute this orientation to a type of "national egocentrism" (p. 13). It may be recalled that Connell (1971) noted a sense of nationalism among Australian students which seemed to inhibit their ability to approach problems in a creative fashion. Taken together, the Torney and Brice (1979) and Connell (1971) studies suggest that one's nation may serve as the paradigm by which to prescribe and evaluate policy.

Stevens (1982) used both quantitative and qualitative methods to study children's developing conceptions of the political sphere. Pencil-and-paper questionnaires were administered to 800 English school children between the ages of 7 and 11. The results of the group interviews which were conducted with a small subsample, form the basis of her study. The size of the groups ranged from two to five children. Questions were designed to assess children's knowledge of and attitudes toward governmental institutions and leaders, as well as to an analyze their ability to evaluate general political issues.

Although the data from the interviews were generally supportive of Piagetian theory, at least one important deviation was noted. Stevens suggests that children may be developing the capacity for formal operational thought in the political realm sooner than has generally been assumed. Her analysis indicates that some of the nine-year-olds were developing the capacity to consider "long-term social consequences, to reason and hypothesize from premises and to use analytical modes of thought" (p. 154). Stevens describes her observations of the children in the older age range as follows:

> By nine, children were showing increased ability to sustain a discussion and to contribute a wider range of political topics to it. Concepts of democracy, leadership and accountability of governments were accessible to them, and some examination of these ideas was attempted, partly in the form of speculative philosophy, for the age nine seems to be the age of the 'worldview,' when general theories of human nature and 'right' social arrangements flow easily. . . . The ten- to eleven-year-olds produced discussions that were able to deal with aspects of competing ideologies and to understand the economic dimension in both world affairs and party politics not, obviously, in economists' terms, but as a causal effect and a dimension of policies. The eleven-year-olds no longer speculated; at this age the children were pragmatists. Party affiliations were chosen on a basis of estima-

> of estimating from past performances and the current credibility of individual members, which would be most likely at the polls. (p. 168)

Stevens attributes at least part of her interviewees' political sophistication to the pervasive influence of television.

It is also likely that the small group discussion format facilitated student learning and understanding. Stevens (1982) acknowledges that "the small group discussion is a powerful learning situation and stimulus. Children seemed to have been helped towards principles around which they could organize their subsequent thinking" (p. 174). Although the dynamics of the discussion groups may have important implications for educators, the format of the interviews also limits the degree to which her findings may be compared to other studies in this area.

Unfortunately, Stevens failed to provide a great deal of basic information, such as how many children she interviewed and the number of students who demonstrated the capacity for formal operational thought. Although her account was written for the general public and she therefore purposely deleted statistical data, such fundamental omissions are regrettable.

Quarter (1984) examined the development of political reasoning on the Israeli kibbutz. Indepth interviews were conducted with 65 youth, ages 7, 11, 16 and 20. Unlike many of the studies in this review, the issues Quarter posed to subjects dealt with informal, day-to-day political issues. Following is an example of such an issue:

> David decides to work in a factory. As it turns out, he has a choice among four different kinds of factories:
>
> 1. a government-owned factory
> 2. a factory owned by a man named Dan
> 3. a factory owned by David and the other workers
> 4. a factory owned by David in which others work for him
>
> Which of the four would you advise David to take? (p. 576)

Quarter found significant age differences in the subjects' responses; although responses reflected the values of the kibbutz, the general trends followed those suggested by Adelson (1971) and Crain and Crain (1974).

The research on the development of policy thought, reviewed above, can be summarized by examining Table 1. The indepth interviews were conducted between 1966 and 1982; they include intensive interviews with children ages 5 through 18 from Australia, England, Israel, the United States, and West Germany. Although variations among the results exist, all of the research strongly supports the assertion that the development of policy thinking is related to age.

It appears that during adolescence, thinking about policy issues gradually proceeds from an individualistic to a sociocentric perspective, from a concern for the immediate to a concern for long-term consequences, and from an intuitive to a hypothetico-deductive mode of reasoning. In early adolescence, positions may be taken on specific issues, but such positions lack a coherent linkage. Later, preferences tend to be interconnected through general principles.

The studies differ to some degree as to when the adolescent is capable of applying abstract reasoning to policy dilemmas. Findings from the research conducted by Adelson and his associates (Adelson, 1971; Adelson & O'Neil, 1966; Adelson, Green, & O'Neil, 1969; Gallatin & Adelson, 1970, 1971) suggest the beginning of such thought processes are more dominant. It was the 15-year-old group that demonstrated a consistent use of abstract reasoning. Crain and Crain's (1974, 1976) research and Quarter's (1984) study support this finding. Similarly, Torney and Brice (1979) note that the 13- and 14-year-olds in their study were beginning to apply abstract concepts and adopt sociocentric perspectives.

The Connell (1971) and Stevens (1982) studies, however, suggest a slightly lower age: both found that many 9-year-olds perceived the political sphere as problematic. Connell believes that some of the 10-year-olds and the vast majority of 12-year-olds in his sample had mastered the idea of issue conflict. Stevens (1982) goes even further: she contends that many of the 9-year-olds she interviewed demonstrated abstract reasoning abilities with respect to policy issues.

Two aspects of the Connell and Stevens studies distinguish them from the others in this category: first, they used a less structured interview format, and second, the interviews were based on actual, not hypothetical, situations. In the other studies, the researchers chose the questions and issues to be discussed. Although both Connell and Stevens were guided by a list of questions, they allowed their students to choose the direction of the conversations. It is possible that the students chose topics with which they were more familiar and which were of greater interest to them. Although purely speculative a higher level of reasoning in these studies would be consistent with Piagetian theory (Piaget, 1972).

The second point of dissimilarity from the other studies--the content of the discussions--suggests that students may use a higher level of reasoning with material which is real to them. Although this general supposition is not supported in other research (Leming, 1973/1974), the question has not been specifically addressed with respect to policy issues.

As previously noted, Stevens' (1982) study stands apart from the others in that she conducted interviews with small groups of children rather than with individual students. This factor alone may account for the higher degree of political learning and understanding. A debate about the exact age at which children are capable of abstract policy reasoning would be somewhat superfluous, however, as children will obviously mature at dif- ferent rates. What is important is that for most children, the period between 9 and 16 years of age seems to be a crucial time for the development of policy thinking.

From this broad picture of the development of policy thinking, we proceed to a collection of studies which focus on one or more specific facets of formal operational thought.

Specific Aspects of Formal Operational Thought

In this group of studies, the researchers have sought to measure the development of one or more aspects of formal operational thought in a political context. The ability to adopt different perspectives, to analyze cause and effect relationships, to understand and apply abstract concepts, and to engage in hypothetico-deductive thought are considered formal operational thought processes; each has been examined in one or more of the studies presented below. While age is an independent variable in all of the studies, several other in-

dependent variables, such as politicization, context, and attitude, have also been analyzed.

A study conducted by Middleton, Tajfel, and Johnson (1970) suggests that children's feelings toward a particular country influence their ability to reason logically with respect to it. The sample consisted of 96 English children, ages 7, 9, and 11.

In this study, dolls with name cards (all dressed alike except for different colored hats) represented 10 different countries, including the children's own nation. All subjects were asked to place the dolls in appropriate places along a rating scale to indicate their "like" or "dislike" for each country. The children were then asked to show how they thought the nationals from other countries would rate the nations.

It was initially determined that 7- and 9-year-olds perceived "less liked" nationals to rate their own country lower than did "better liked" nationals ($p < .002$ and $p < .05$, respectively). For example, Soviet nationals (from a country among the least preferred) were seen to rate the Soviet Union less favorably than United States nationals (a preferred group) rated the United States. There was no such difference in ratings among the 11-year-olds. These results were consistent with the findings in Piaget and Weil's (1951) study.

However, in this study it was also found that all children were able to adopt the perspective of like nationals. That is, given that the country was among those preferred by the children, even the 7-year-olds were able to understand that persons from these countries would express a strong liking for their own country. The Piaget and Weil (1951) study did not distinguish between liked and disliked countries.

Middleton et al. (1970) concluded as follows:

> Conceptual reciprocity has been shown not to be attained equally with respect to all nations, as would be expected if the child's behavior were governed only by his ability to handle the logical relationships involved in understanding the relativity of concepts of nationality; the form of reasoning required to answer for a disliked national is exactly the same as that needed for a liked one. (p. 133)

As such, the results of this study suggest that the ability to see other perspectives is influenced by the affective component. In this particular situation, the effect of national preferences on the attainment of reciprocity diminished with age. One wonders how national preferences may affect one's ability to see another nation's stance on a particular issue.

The Middleton et al. (1970) study is particularly significant because it examines children's reasoning skills with respect to identifiable nations. Although analyzed in a superficial context, it is perhaps more realistic than many other studies in the area.

Merelman (1971) analyzed adolescents' approaches to a "real" policy problem, poverty. He initially defined policy thinking as the "styles of cognition and evaluation employed when confronted with the policy problems of politics" (p. 1033). He identified four dimensions of policy thinking: moral thought, cause-effect thought, sociocentrism, and imaginative thought.

Interviews were conducted with 18

eighth grade students (ages 13 and 14) and 19 twelfth grade students (ages 17 and 18). The results were complex: ages was significantly associated with moral thinking, linkage thinking, and definitional sociocentrism. With increased age causal thought and role-taking capacity also expanded. Ages was either negatively related or wholly unrelated to both forms of effect thinking, to social source thinking, and to hypothetical thought.

The students were also interviewed regarding their degree of political interest. The differences in policy thought between low and high politicization groups were weaker than those between younger and older students. Highly politicized students were usually more advanced in their policy thinking than less politicized types, but in no case were the differences statistically significant.

Although age was a better predictor of mode of policy thinking than was politicization, the degree of association with age was weak and, in some cases negative. Merelman suggests that the results offer only modest support for both developmentalists and environmentalists; he concludes the "most political thinking results from a combination of genetic-maturational and politically related environmental factors" (p. 1047)

Merelman later reanalyzed the data from this study to determine whether some students demonstrated more structured policy thinking than others (1973). He found the strongest intercorrelations involved causal, hypothetical, or moral thought. The three forms of imaginative thought (linkage thinking, hypothetical thought, and role taking) were quite distinct from one another.

Age appeared unrelated to structured policy thought; in fact, younger students evidenced slightly more cohesive thought patterns than did older students. However, highly politicized students demonstrated a more structured approach to policy issues than did students who were less politicized. Merelman concludes: "a student's level of maturation on variants of policy thought depended more on his age than his level of politicization . . . however, politicization helps produce coherent thought, not necessarily mature, policy-thinking styles" (p. 166).

This means by which Merelman chose to measure the dimensions has been criticized for its lack of congruence with theory (see Harmon, 1973); however, his basic conceptualization of policy thinking as a multidimensional construct deserves consideration. A more refined conceptualization of policy thinking was employed in a later study (Merelman & McCabe, 1974). In this study, two orientations toward policy problems were distinguished: a formal orientation, based on the use of abstract rules, and a substantive focus, based on attention to concrete aspects of a problem. The researchers suggest that both age and the salience of an issue influence one's reasoning abilities.

The sample consisted of 60 seventh graders, ages 11-12, and 58 twelfth graders, ages 17-18. Interviews were conducted with adolescents about two public policy problems; both dilemmas involved the will of the majority versus the intensity of the minority. In addition to the interviews, all subjects completed a short test of reasoning ability (by Lunzer, cited in Merelman & McCabe, 1974) and a survey designed to measure political awareness. The results indicated that older students were significantly more likely to use abstract rules (e.g., majority preference and intensity of preferences) in conceptualizing and resolving the dilemmas; the younger students were more likely to focus on the concrete features of a particular situation.

The adolescents' orientations were strongly influenced by the salience of the issues, regardless of age. The students ranked poverty as a more important issue than prison reform. Students were more likely to use formal reasoning for the prison reform dilemma than for the poverty dilemma; they were less guided by rules and more influenced by their own substantive preferences when confronting the poverty dilemma ($p < .001$).

Of the independent variables, including politicization, age and reasoning ability, performance on the Lunzer test (designed to measure formal reasoning capacity in the Piagetian sense) was consistently the most strongly related to formal political reasoning. The more politically aware twelfth graders were more likely to use formal reasoning than were their less politicized counterparts; this effect was not apparent for the eighth-grade students. The researchers conclude that "political awareness without cognitive maturation will usually not permit the use of decision rules in the dilemma. However, political awareness can stimulate such use once cognitive development has reached a high level" (p. 678). This finding is consistent with Piaget's (1972) suggestion that formal reasoning is most likely to be applied in the individual's area of interest.

An interesting study by Furth and McConville (1981) explores the development of the concept of compromise with respect to policy dilemmas. Responses to various hypothetical dilemmas posed to 72 adolescents ages 14 to 19, were rated according to the degree to which any compromise solutions were offered. Statistically significant differences among age groups were noted to all 12 dilemmas ($p < .05$). Compromise is, in effect, a recognition of differing perspectives and competing claims within a society, and thus is reflective of formal operational thought.

Johnston's (1983) study was one of the few to examine foreign policy thinking specifically. In his study, a written multiple-choice instrument was used to assess the development of students' thought with respect to foreign policy dilemmas.

He reasoned that the level of political impulsiveness displayed by students would be indicative of their level of political and intellectual maturity; therefore, students who had the ability to hypothesize about long-range consequences and alternatives would demonstrate the capacity for formal operational thought and exhibit a low level of political impulsiveness.

An example of one of the items follows:

> If a revolution occurs in another country, what should our government do?
>
> A. What our country should do depends on many things.
>
> B. Nothing, don't get involved.
>
> C. Help the people who are revolting.
>
> D. Help the country's government stop the revolution.
>
> E. I don't know. (p. 210)

Johnston categorized the responses according to levels of political impulsiveness: (A) low impulsiveness; (B) moderate impulsiveness; (C) and (D) high impulsiveness; and (E) not categorized.

The sample consisted of 523 students in grades 4 through 12. The results indicated that the level of political impulsiveness was inversely related to each

of the four independent variables: age, grade level, IQ, and level of political information ($p<.001$). Political information was a better predictor of political impulsiveness than was IQ; age and grade level were better predictors of political impulsiveness than was political information. Johnston concludes that the data supported the applicability of Piaget's cognitive developmental model to the process of political maturity.

Unfortunately, Johnston assumed that students giving his predetermined response (in the example provided, choice "A") had the ability to understand cause-effect relationships. The study would have been enhanced had he interviewed the students subsequent to test administration to assess whether they engaged in such reasoning processes.

The four studies in this section, summarized in Table 2, generally support the findings of the studies in the previous section. Specific aspects of formal operational thought--the ability to adopt different perspectives, to analyze cause and effect relationships, to understand and apply abstract concepts, and to engage in hypothetico-deductive thought--were found to be age-related when analyzed in a political context. These studies also examined the relationship of other independent variables to formal reasoning processes. Findings from the three studies which examined the possible influence of politicization (Johnston, 1983; Merelman, 1971, 1973; Merelman & McCabe, 1974) suggest that students' level of political interest may be related to their reasoning ability, particularly in middle and late adolescence. While interest does not seem as important a variable as age or cognitive development, it does appear that a higher degree of politicization is associated with more abstract policy reasoning.

Findings from the Merelman and McCabe (1974) study also suggest that the content of a problem may influence policy reasoning; the more salient the issue to the student, the less likely he or she is to apply abstract concepts to policy dilemmas. On a related note, Middleton et al. (1970) suggest that children's feelings toward a particular country influence their ability to reason logically with respect to it. In this study, children had more difficulty taking the perspective of a "disliked" national than a "liked" national.

Salience and preference are certainly distinct concepts; one may perceive (as many United States citizens do) the Soviet Union to be an important yet disliked country. However the variables are similar in that they tap the individual's orientation toward a specific situation. As these studies suggest, they may also influence one's reasoning abilities with respect to a specific issue or problem. Such factors may be quite relevant to an understanding of the development of foreign policy thought.

We turn now to studies which offer further support for the developmental nature of policy thought. These studies examine the relationship of policy thought to more established developmental models, those of logical concept and moral judgment development.

The Relationship between Political Policy Reasoning and Other Developmental Theories/Stages

Is the development of political party reasoning related to logical, social, and moral development? Only a handful of studies have specifically addressed this question, yet Broughton (as cited in Lonky, 1983) has suggested that such associations are a minimal requirement for the establishment of a cognitive developmental domain of political reasoning. Although students of political cognition

have often inferred relationships between the development of policy thought and previously established sequences of development, few have conducted investigations using instruments designed to assess logical concept development or moral development.

Two studies have examined the relationship between logical concept development and policy thought. Lonky (1983) investigated the connection between logical concept development and policy thought among a group of 81 college sophomores. Three instruments were administered to the subjects: the Tomlinson-Keasey-Campbell (Lonky, 1983) formal operations assessment battery, individually administered Piagetian tasks of formal operational ability, and Harmon's (1973) Political Judgment Interview. The Political Judgment Interview is based on five dilemmas concerning the just distribution of political resources, including political power, economic resources, equality of opportunity, social status, and legal status. Responses were coded according to Kohlbergian-like stage scores of pre-conventional, conventional, and post-conventional political reasoning.

Results indicated a moderate correlation between performance on the assessment battery and the Piagetian tasks ($r=.75$; $p<.001$). An analysis of subjects' cognitive level, based on these measures, and their political reasoning level demonstrated a significant interaction effect. Further analyses indicated that logical concept development was a necessary but insufficient basis for political reasoning development. In general, the students at the concrete operational stage demonstrated preconventional reasoning ability, students in the transitional cognitive stage were most likely to exhibit conventional political reasoning, and responses from subjects at the formal operational stage indicated either conventional or post-conventional reasoning abilities.

The second study that attempts to measure the relationship between logical concept development and policy thought was conducted by Kuhn, Langer, Kohlberg and Haan (1977). Although the study was primarily designed to examine the relationship between logical concept and moral judgment level, a section of their extensive research involved an investigation of social concept development. The sample consisted of 162 subjects between 10 and 50 years of age. Logical operations was measured by performance on three Piagetian tasks; moral judgment was assessed by means of the standard Kohlberg interview. The social concept measure was an interview format adapted from Adelson and O'Neil (1966). In the basic interview, the subject is asked to imagine a group of people going to a new island where they must set up laws and a government (see page 11 of this review). Policy dilemmas were not presented to the subjects; instead, questions were designed to assess the subjects' concept of the purposes of government and responses were then coded according to stages of moral judgment.

The results indicated a significant relationship between social concept level and logical operational level ($p<.001$) and a significant but weaker association between social concept level and moral judgment level ($p<.05$). The researchers suggest the possibility of a sequence in the order of development: "The S must first attain formal operations in the purely logical domain. He then may go on to attain a principled level in his conception of the social order, then to a principled level in his comprehension of judgments in the moral domain, and finally to the spontaneous use of principled moral judgment" (p. 173). Although the results of their study generally support such a continuum from formal

logical operations to principled moral judgment, the researchers note that a small number of the subjects deviated from the expected pattern; they recommend further research in this area. Unfortunately, the results in this section of their study were not reported according to age.

The work of Lonky (1983) and Kuhn et al. (1977) were the only studies located that attempted to measure the relationship between logical concept development and political reasoning. The results suggest a "necessary but not sufficient relationship" between the constructs. The latter study further suggests the possibility of continuum from logical concept development to social concept development to moral judgment. The possible relationship between political reasoning and moral development has been investigated somewhat more extensively.

Harmon (1973) examined this possible association using a Moral Judgment Interview based upon which Kohlberg's stage typology and a researcher-designed Political Judgment Interview scored according to Kohlberg's stage theory. The political dilemmas were created to measure reasoning about the just distribution of resources. The content of the dilemmas was purposely vague as to time and place; Harmon felt that "issues with high saliency and emotional content would . . . introduce social-psychological factors which would make interpretation of results difficult" (p. 43). Both instruments were administered to 84 subjects, ages 10, 13, and 16.

The results supported a cognitive developmental interpretation of political reasoning: older students demonstrated significantly higher stages of both political and moral reasoning. Older students also displayed significantly greater consistency in stage-level reasoning across dilemmas than did younger students. Among 10-year-olds, there was significant variation in the level of reasoning across dilemmas.

Unlike the Kuhn et al. (1977) studies, Harmon's analysis found no evidence to support a lag between the development of political and moral reasoning. There was a significant positive correlation between stage scores for political and moral reasoning ($r = .77$; $p < .001$). Harmon concludes that "both political and moral reasoning are cognitive-developmental in nature and both develop concurrently with each other and with underlying cognitive development" (p. 78).

Lockwood (1975) also used Kohlbergian stage scoring methods to investigate the relationship between political and moral reasoning. Three standard Kohlberg dilemmas and three public policy dilemmas were presented in an interview format to 60 students, ages 12-13 and 16-17. Unlike Harmon, however, Lockwood's policy problems were based on actual incidents. The results of the study, however, were similar to those found by Harmon: older students demonstrated significantly higher stage-level reasoning than did younger students for both types of dilemmas. Lower stage-level reasoning was characterized by a focus on the situational aspects of the dilemmas; higher stage-level reasoning involved an attention to the general issues raised by the dilemmas and their social or political implications. There was a significant correlation of .48 ($p < .005$) between stage of moral and public policy judgment. It should be noted, however, that stage of reasoning about moral dilemmas accounted for only about 20 percent of the variance in stage reasoning on public policy dilemmas.

Endo (1973) collaborated with Lockwood in the research described

above. His dissertation provides an extensive examination and analysis of the study. Two points deserve note. First, Endo had hypothesized that the subjects' stage of reasoning would be significantly higher on moral as opposed to public policy dilemmas due to the students' (ostensibly) higher degree of involvement in the latter type of issue. The lack of support for this hypothesis was explained by the students' general orientation toward the content of the dilemmas. Student questionnaires and indepth interviews with a small subsample indicated that both types of dilemmas were perceived by the students as distant from their immediate concerns. Endo suggests that had the researchers determined the public policy issues which the students perceived as salient, their results might have been different. His discussion may underscore the limitations of studies which fail to take into account students' perspectives.

Second, the indepth interviews with students suggested that when the subjects felt the issues presented in the dilemmas were related to their self-interest, they were more likely to use lower stage reasoning. Endo (1973) states, "A person may be capable of using stage five moral thought but is tempted to use stage two thought in some situations where his self-interest is affected" (p. 193). In the realm of domestic and foreign policy thought, one wonders if issues which are perceived to threaten national interest might elicit a similar effect.

Eyler (1980) approached the possible relationship between policy reasoning and moral judgment from a slightly different perspective. Her work is an extension of the political science literature that strongly suggests the majority of Americans support democratic principles in the abstract, but fail to apply such principles in concrete situations (Prothro & Grigg, 1960). Eyler hypothesized that person who demonstrates more principled reasoning (according to Kohlberg's model) would also be more likely to apply democratic norms in specific situations than would non-principled thinkers. Other dependent variables in the study included conflict legitimacy, citizenship role, and political interest. It was hypothesized that principled thinkers would demonstrate greater acceptance of political conflict, more support for active citizenship, and greater political interest than would non-principled thinkers.

The sample included 135 college freshmen and sophomores in a small private teacher's college. The Defining Issues Test (DIT) was administered to assess the subjects' stage of moral reasoning. The application of democratic norms in specific situations was assessed by the subjects' written responses to statements such as the following: "In a city referendum deciding on tax supported undertakings only taxpayers should be allowed to vote" and "If a person wanted to make a speech in this city against churches and religion, he should be allowed to speak."

The results supported the primary hypothesis; principled thinkers were significantly more likely to support democratic norms in specific situations than were non-principled thinkers. In addition, those who demonstrated the capacity for principled reasoning on the DIT were more accepting of conflict within the domestic political sphere and more supportive of an activist citizenship model than were non-principled thinkers. No difference was found between the two groups in terms of political interest.

The researcher suggests the results offer support for the cognitive model of moral development. She notes, however,

the limitations of hypothetical dilemmas in facilitating cognitive moral growth. She states: "The development of a more complex and more adequate socio-moral perspective depends on involvement in and resolution of genuine conflict" (p. 24).

Lonky, Reihman, and Serlin (1981) investigated the possible relationship between policy reasoning and moral judgment in a manner which was similar to that used by Eyler (1980). They hypothesized that persons who demonstrate more principled reasoning would also display greater consistency between general and specific socio-political belief statements. Specific value statements such as "An avowed Communist should be allowed to run for mayor of this city" and "If a former convict were elected mayor of a town, the courts should overturn the election" were derived from the general value statement, "Everyone should have an equal right to hold public office." In this example, disagreement with the specific statements and agreement with the general statement would reflect consensus of political values and beliefs. In essence, the general statements reflect abstract democratic values and the specific statements more concrete applications of these values. The researchers hypothesized that the level of moral reasoning and degree of consistency would increase with age.

The Defining Issues Test of moral judgment (DIT) was used to assess level of moral reasoning and a researcher-designed Political Judgment Questionnaire (PJQ) measured the structure of sociopolitical values. Value statements on the PJQ concerned eight major political issues: majority rule, minority rights, equality of opportunity, civil liberties, freedoms, social welfare foreign policy, and respect. The two instruments were administered to 219 students between the ages of 13 and 20.

The results demonstrated a significant relationship between moral reasoning and consistency of political values and beliefs; this relationship was significant with age controlled. Further, older students demonstrated significantly greater consensus between their political values and beliefs than did younger students. The researchers offer their results as support for the cognitive developmental interpretation of political development; they further conclude that the ability to understand democratic concepts and principles may be related to cognitive development in the moral domain.

The studies conducted by Patterson (1979) and Breslin (1982) are perhaps the most relevant in this series of works to the present review. Both researchers examined students' level of political reasoning about dilemmas involving civil rights for dissidents or outgroups. Neither used an independent measure of moral judgment; rather, they categorized responses to political dilemmas according to Kohlberg's framework. Hence, the studies neither supported or rejected a relationship between political reasoning and moral judgment; policy reasoning was, in fact, equated with moral reasoning. They are included in this section because they suggest that the Kohlberg framework may be applicable to some aspects of political reasoning.

In Patterson's study, 55 students ages 9-12 were presented with a situation in which a group of Communists wanted to stage a protest in a small town. The mayor of the town, under a great deal of pressure from the community, must decided whether to revoke the permit he had previously issued to the group. Students were asked to decide what action, if any, the mayor should take. All children were interviewed and their reasoning processes were categorized according to Kohlberg's stages of moral

development.

A number of dependent variables were analyzed in this study, including age, grade, political participation, self-esteem, tolerance (willingness to allow the protest), and attitude toward communism. Level of moral reasoning and attitude toward communists were the only variables significantly associated with the willingness to allow the protest to take place. The children's attitudes were not related to their level of reasoning. Patterson states, "It is suggested that beliefs and attitudes considered within the framework of moral development may substantially add to explanations of political tolerance" (p. 19).

Breslin's (1982) study also examined youth's willingness to extend rights to disliked groups. A stratified group of 1,006 post-primary 17-year-old seniors from Catholic and Protestant schools in Northern Ireland and the Irish Republic were presented with four dilemmas involving outgroups and their claim for basic civil rights.

Respondents selected from four predetermined resolutions to the dilemmas; one choice was deemed a "tolerant" response, another an "intolerant response," and two compromise solutions. For each dilemma, ten reasons corresponding to Kohlberg's model were offered. Students were instructed to rank the reasons according to their preferences; the researcher then classified students as either principled or conventional thinkers.

Results indicated a significant relationship between principled thinking and tolerant decisions. Other variables related to moral reasoning included intelligence, attendance at an academic school, and the discussion of controversial issues in school; of these, only the last was related to tolerance.

The findings from Breslin's (1982) study tend to collaborate those from Patterson's (1979) research. First, principled thinking appears to be related to tolerance. Second, responses to dilemmas involving political rights can be roughly categorized according to Kohlberg's developmental stages.

A recent study by Wingfield and Haste (1987), however, offers a critique of Kohlberg's model as it applies to political reasoning. They suggest that how persons perceive political dilemmas is as important as how they reason about the dilemma; Kohlberg has tended to emphasize the latter. They further suggest two predominant types of conceptualizations of dilemmas:

> One emphasizes the separateness of the individual from the environment, the imposition on the environment of order, rule or controlled manipulation. The other emphasizes the harmony of, or the connectedness between, the individual and the environment, the gaining of knowledge through participation and through appreciation of the whole context. (p. 226)

Individuals' conceptualizations of issues reveal their cognitive style. Borrowing from Gilligan's (1982) work, Wingfield and Haste note that perceptions of "separateness" are stereotypically associated with males, while perceptions of "connectedness" are associated with females.

Their sample consisted of nine boys and nine girls aged between 12 and 16; each were presented with the "Islander's story," devised by Adelson and his colleagues (see page 9 of this review). Persons who held a separateness orientation to the dilemma tended to stress individual rights and responsibilities, rules

and principles. In contrast, persons who brought a connectedness orientation to the dilemma attempted to view the perspectives of all of the individuals involved in the situation and to offer solutions that integrated all of these perspectives. Wingfield and Haste found females to be significantly more likely to adopt a connectedness orientation. When probed, both males and females were able to adopt the "other" orientation, but males had more difficulty than did females.

Wingfield and Haste's focus on cognitive styles suggests yet another important dimension of policy thinking. Research thus far has analyzed how individuals reason about policy issues; however, if we want to understand policy thinking as an active process, then we need to be able to grasp the person's conceptualization of the issue/policy.

The studies concerning the relationship between political policy reasoning and other developmental stages, summarized in Table 3, are far from conclusive. However, taken together they suggest that the development of political policy reasoning is related to logical concept and moral judgment development. Both investigations of the relationship between logical concept development and political reasoning suggest that growth in the logical cognitive domain is a necessary but insufficient basis for the development of political reasoning abilities. One study (Kuhn et al., 1977) found that the stage of moral judgment lags significantly behind the stage of policy conceptualization. This conclusion is supported by the work of Gallatin and Adelson (1970) and Crain and Crain (1974). In addition, the seven studies which analyzed the effect of age found that the level of policy reasoning was positively related to age. This is consonant with the studies presented in the previous two sections.

Two possible limitations to the conclusions offered by this group of studies should be noted. First, the majority of the studies reviewed have categorized responses to dilemmas which are political in nature according to Kohlberg's typology; the one exception is the research conducted by Wingfield and Haste (1987). The underlying assumption seems to be that Kohlberg's typology is an appropriate means by which to classify responses to political dilemmas.

A second limitation involves the content of the policy dilemmas presented to students. Only one study (Endo, 1973) assessed students' perceptions of the salience of specific policy issues. In this study, it was found that there was no difference between students' sense of involvement in the public policy and the moral dilemmas; both types of issues seemed distant from the students' personal domain. Researchers' implicit assumption that their policy dilemmas are tapping students' concerns may be erroneous.

Given the basis of the studies, then, what can be concluded? First, responses to dilemmas which are political in nature can be categorized according to the Kohlberg typology. Second, when such responses are classified according to the typology, there is a high correlation between the Kohlbergian stage coded for these responses and the stage coded for responses to the standard moral dilemmas.

It seems that at least two unanswered questions remain: Is the Kohlberg typology an appropriate means by which to code responses to policy dilemmas? If so, is it the best means by which to understand policy reasoning? All this is not to diminish the significance of the findings from the research, but rather to add a qualification to the conclusions offered by the researchers.

Conclusions from the Research

What may be concluded from the research concerning the development of policy thought? Although this area of research is still in infancy, several general conclusions may be offered.

First, the studies strongly suggest that the development of policy thinking is related to age. Early to middle adolescence appears to be a particularly important time for the development of policy thought.

Second, although to a lesser degree than age, political interest seems to affect the level of policy reasoning. While there may be some debate as to when interest has the greatest effect, it appears that a higher level of interest is associated with higher levels of reasoning.

Third, attitude toward a particular object, be it a person or a nation, appears to influence policy thinking. Specifically, the more negative the attitude, the less likely the individual will employ higher level reasoning processes.

Fourth, the development of policy thought appears to be related to other developmental models. Policy reasoning seems to lag somewhat behind logical concept development; whether policy reasoning precedes moral reasoning is still unclear. Perhaps the best conclusion is simply that there seems to be an association between the two.

All of the above conclusions suggest that Piaget's basic conceptualization of cognitive development of policy thought. As the next section will suggest, however, there are limitations in applying the Piagetian framework to the development of policy thought.

Policy Thinking: The Limitations of the Current Research

The methodological limitations of the research on policy thinking among children and adolescents are similar to those associated with much of the research in the social sciences, e.g., the lack of longitudinal design, the reliance on one means of collecting data, the limited sampling of children from other than white, middle-class backgrounds. It is indeed striking that of all the studies drawing developmental implications, only one (Adelson, 1971) employs a longitudinal design, albeit limited in scope. Aside from these important limitations, however, it is suggested here that there are certain factors which may need to be considered in a study of foreign policy thought, particularly foreign policy thinking.

First, several studies have noted a nationalistic orientation in students' responses to policy questions. Cooper (1965) in his study of the development of children's conceptions of war, noted the presence of a "patriotic filter" in the children's responses--a filter which acted to increase hostile evaluations of other nations. The responses of children as young as nine years of age indicated the presence of such a filter. Connell's (1971) assessment of the strength of the "triangle of nationalism, anticommunism, and the threat schema" (p. 234) has already been noted. Torney and Brice's (1979) study suggests that students may use the United States as the standard by which to evaluate the actions of other nations. Finally, the Middleton et al. (1970) study suggests that children may experience difficulty in adopting the perspective of "disliked" nations. It should be noted that these studies were not limited to students in the United States; the studies also involved English, Japanese, and Australian children. However, all of the studies were conducted in industrialized democracies.

This is not to argue that nationalism is a developmental construct. Obviously, the nation state has not always been the primary political unit. In addition, cross-cultural studies suggest varying degrees of national attachment across countries (Knight, 1982/1983; Statt, 1972; Torney, Oppenheim, & Farnen, 1975). While degrees of nationalistic orientations differ among nations, individuals within a nation exhibit varying levels of nationalism. Kelman (1969) argues that "individuals may vary in the components of the [nationalistic] ideology that they emphasize or de-emphasize, the intensity of their commitment to the nation state, their definition of the citizen role and the expectations that go with it, and the way in which they enact this role" (p. 278). He further states, however, that "the average citizen is prepared to meet the expectations of the citizen role and to comply with the demands that the state makes upon him, even when this requires considerable personal sacrifice" (p. 278). Further, it has been noted that citizens generally support their nation, regardless of its ability to meet their needs (Davies, 1968).

All this suggests that while a sense of nationalism is not a developmental phenomenon, it is a pervasive orientation toward the global sphere which may influence one's reasoning with respect to policy issues. A study of the development of policy reasoning should therefore include an assessment of the degree to which nationalism affects such reasoning.

A second factor which needs to be considered in understanding the development of policy thinking is the manner in which children learn about the global sphere and interact with it.

Connell (1971) differentiated between political cognition and physical cognition as well as other forms of social cognition; his analysis is useful here because the characteristics of political cognition he cites are accentuated in the global sphere.

Connell (1971) suggests that political cognition differs from physical cognition and other forms of social cognition in that the former is more "distant" from the child; the political sphere is not immediately accessible. According to Connell, children's construction of the political sphere is unique in at least three respects: (a) Children can exert little or no direct influence on the political sphere, as the formal political environment is outside their control; (b) As a result of their distance from the political environment, children receive no direct feedback from it; feedback is an essential part of learning; and (c) Children receive their information about politics through indirect means; the information they receive is mediated by adults.

These three aspects of political cognition are heightened in the global sphere. Children can anticipate a formal, direct role in national decision-making; their role in global decision-making is more amorphous. True, as adults they will be able to vote for leaders who will represent their views on foreign policy issues. But there are no specific institutionalized processes, such as voting, by which to influence international decision makers (Schmidt, 1975/1976).[2] With respect to the second and third qualities, it should be noted that while children may interact with local or even national political leaders and witness "political" events at those levels, it is much less likely that they will have the same experiences at the international level.

There is a distinction between knowledge of the global sphere and interaction with it. Children may become aware of international political objects and concepts at a very early age. Miller (1971) found six-year-olds to be just as aware of distant nations as ten-year-olds. Similarly, Statt's (1972) research demonstrated that seven- and eight-year-olds often understand the concept of "foreigner." Television may offer children a means by which to become familiar with international objects much earlier than was once thought. However, this does not alter the nature of the child's interaction with the global sphere. Connell (1971) describes this relationship as follows:

> The involvement of the children in world politics is an involvement of emotional reaction, not an involvement of action or potential action. Only half of the classic exchange between the citizen and his city is present here. Television can show things to fear, things to be shocked by, things to amuse, things to like and things to hate, but it does not show the children things to do, forms of engagement. It simultaneously draws them in and holds them at a distance. (p. 129)

The nature of the child's international learning needs to be considered in a study of the development of policy thought.

A third factor which deserves further study is the possible link between policy thought and moral judgment reasoning; the review of the literature suggested a nexus between policy reasoning and moral judgment reasoning. In all but one of the studies, the research was based on Kohlberg's theory of moral development. With only one exception, the studies used Kohlbergian standard dilemmas to assess the stage of moral judgment. Although it is possible that reasoning

about policy dilemmas might be amendable to Kohlberg's stage categorizations, there are two reasons why the nature of the dilemmas may not correspond to that of the standard dilemmas.

First, the standard dilemmas involve characters who have face-to-face contact with one another. The same was true for the public policy dilemmas presented in Lockwood's (1975) study. Although one of the probing questions at the end of the Kohlberg interviews (Kuhn, et al., 1977, p. 181) does ask the subject if his or her response would be the same if one of the characters was a stranger (e.g., if Heinz's wife was a stranger instead of his wife), the context of the story has already been set. One wonders whether an individual's responses would vary if the order of the questions were reversed. Policy issues, on the other hand, often involve groups of people who have had no direct contact with one another. Whether persons reason similarly in the two situations is unknown.

Second, many domestic and foreign policy issues require decisions about extending aid to individuals and/or other countries. Eisenberg-Berg (1976) differentiates between constraint-oriented issues and prosocial issues. She notes the following:

> In these [standard Kohlberg] moral dilemmas, the individual's ideas about prohibitions and authority are central to his resolution of the moral conflict. None of the Kohlberg stories deal strictly with prosocial issues, that is, with dilemmas in which the individual must choose between satisfying his own wants, needs, and/or values and those of others, particularly in contexts in which laws, punishment, and formal obligations are irrelevant or de-emphasized. (p. 552)

Her research suggests that while the two forms of reasoning are empirically related, they differ in significant respects. Issues concerning welfare or foreign aid, in particular, would seem to tap a dimension of prosocial reasoning.

All of this is not to suggest that Kohlberg's model might not be relevant to a better understanding of students' level of policy reasoning; it is to suggest that some important issues involved in a direct application of his model, including but not limited to those set forth above, need to be clarified. Kohlberg's theory was intended to provide a descriptive, not a prescriptive model of moral development. It seems that those interested in the development of policy thought should also begin with a descriptive model.

This section has attempted to highlight some of the factors that should be addressed in a study of policy thinking; others will surely surface. The studies of policy thinking in the present review have provided a *guide* for an investigation of policy thought. It is suggested, however, that this guide may not be *directly* applicable to the development of foreign policy thought. Many questions remain, however, some of which are highlighted in the next section.

Directions for Future Research

There are many areas to be investigated in studies of the development of policy thinking. The review of the research suggests various needs which should be addressed. Following is a sampling of questions which may serve to direct future researchers. The list is hardly exhaustive; it serves only to highlight areas to which investigators may want to direct their attention. In addition, the questions are not presented in any particular order, as it seems that greater knowledge in each of the areas could provide valuable insights into the development of policy thinking.

1. Do students approach issues of military policy in the same manner in which they approach issues of a nonmilitary nature? Connell's (1971) description of the "triangle of nationalism, anti-communism, and the threat schema" (p. 234) suggests that the ability to engage in abstract reasoning processes may be more limited when military policy issues are presented to students than when they are confronted with nonmilitary policy issues. Eisenberg-Berg's (1976) differentiation between constraint-oriented issues and prosocial issues may also be relevant. Her research suggests that reasoning about these types of issues differs in significant respects. Although not all nonmilitary issues are prosocial issues, military issues are typically constraint-oriented issues.

2. Do students have more difficulty adopting the perspective of a "disliked" national government as opposed to a "liked" national government? The research by Middleton et al. (1970) suggests that students experience more problems understanding the perspectives of individuals from less preferred countries than those from more preferred nations. Although other research has demonstrated that students differentiate between foreign peoples and countries (Button, 1971; Pike & Barrows, 1979), it may be useful to note whether students' attitudes toward countries influence their abilities to understand different aspects of foreign policy issues.

3. How does student interest in specific policy issues affect policy thinking? A number of studies reviewed (Johnston, 1983; Merelman, 1971, 1973; Merelman & McCabe, 1974) suggest that students' general level of political interest may be related to their reasoning ability, particularly in middle and late adolescence. Higher levels of political interest tend to be associated with more abstract reasoning abilities. Further, the Connell (1971) and Stevens (1982) studies, which allowed students to choose the direction of political discussions, suggest higher levels of reasoning than studies which used a more structured interview format. These studies suggest that interest may have a positive influence on policy thinking.

The research has not, however, addressed children's interest in foreign policy issues. In this area, it is important to develop a better understanding not only of students' interest in foreign policy issues versus domestic policy issues, but also of students' interest in different foreign policy issues (e.g., terrorism, human rights, pollution, population, or international conflict). Differentiation among types of issues may yield a more refined understanding of the effect of interest on both domestic and foreign policy thinking.

4. Does the salience of an issue affect students' foreign policy thinking? Remy, Nathan, Becker, and Torney (1975) note that individuals generally perceive themselves to be less directly connected to the global than to the national sphere. They

state: "For most people, most of the time, domestic political issues and events touch upon and activate a wider range of daily roles--such as student, housewife, mayor, doctor--than do international events" (p. 8). International crises offer an exception; similarly, military issues tend to be more salient to individuals than are nonmilitary issues. A survey of 3,000 college students found that international conflict and war was perceived as the most important issue of eight global issues presented to them (Barrows, 1981).

The study by Merelman and McCabe (1974) suggests that persons are more likely to use abstract reasoning processes with less salient issues; when reasoning about issues which are perceived to be of greater importance, individuals seem to attend to the concrete aspects of the specific problem. As such, studies of the development of policy reasoning may need to address the salience of issues to individuals.

5. Is there a difference between moral judgment and moral deliberation when reasoning about policy issues? Leming (1973/1974) distinguished between moral judgment and moral deliberation. He defined moral judgment as "moral reasoning where one rates as good-bad, right-wrong, etc. a person or some event" and moral deliberation as "the moral reasoning involved when one asks himself, 'What is the morally correct thing for me to do in this situation?'" (p. viii). The subjects in his study, students in grades 8 and 12, demonstrated significantly lower stage reasoning in the deliberation mode than in the judgment mode.

If we are interested in students' reasoning about their policy preferences, it would seem that an understanding of both modes would be insightful. For example, students may reason differently when asked "What would you do about this issue? Why?" as compared to "Should the President (Congress, media, etc.) have responded to the issue in this manner? Why?" The way in which questions about policy issues are framed may therefore influence the nature of the response.

6. Do student variables, such as gender, class, and race influence policy reasoning? These variables have received surprisingly little attention in the research on the development of policy thinking.

Twenty-two major studies were reviewed in the present paper; of these, seven failed to report any analysis of sex differences. Of the 14 studies which did examine their data accordingly, only three suggested differences between males and females.[3] Stevens' (1982) interviews with children suggest that girls tended to be more subjective and boys more objective in their approaches to political issues; furthermore, girls seem less willing to experiment with political ideas than boys. Lockwood (1975) found statistically significant sex differences, with girls scoring lower than boys on both public policy dilemmas and Kohlberg dilemmas. Eighth grade girls were found to score lowest of all groups in the sample.[4]

The majority of the samples in the studies reviewed were comprised of predominantly middle class students; therefore, analyses of class differences would have been appropriate. This observation, however, serves to point to a void in the research. Class differences were analyzed in only nine of the studies; two studies suggested potentially important differences. The research conducted by Middleton et al. (1970) suggest that higher socioeconomic students are more able to adopt the point of view of a national from a "disliked" country than lower socioeconomic status students. Stevens (1982) notes that in her discussions with children, those from middle class environments tended to acquire the "language of politics" sooner than children

from lower class homes. Although students' unfamiliarity with political jargon may not affect their capacity to engage in abstract reasoning processes, it seems that it could affect a researcher's interpretation of the students' responses.

The lack of attention to racial differences is even more striking than is the dearth of data regarding either sex or class differences. The majority of the research was based on samples which were comprised totally or predominantly of white students; many students failed to even note the racial composition of their samples. The omission is particularly glaring in view of the political socialization literature that has underscored the importance of race in understanding student political attitudes and experiences (Hepburn & Napier, 1982-83; Langton & Jennings, 1968; Liebshultz & Niemi, 1974; Long, 1983). In the present review, only Gallatin (1985) and Lonky et al. (1981) conducted an analysis of racial differences; however, the researchers involved in the latter study also stated: "The total sample consisted of 126 males and 161 females who were predominantly white Protestants or Catholics" (p. 429). No further information concerning the racial composition of the sample was provided.

The scarcity of data regarding student variables underscores the need for such studies; research on the development of policy thinking should include such analyses.

7. Is stage theory the best approach to the study of policy thinking? Most of the researchers cited in this review have attempted to ground their work in stage theories. And yet the underlying assumptions of stage theories have been seriously questioned (Biggs & Collis, 1982).

First, persons' responses can rarely be categorized in one stage. Rather, most people give responses that may "fit" several stages. For example, not only might an individual's thinking exhibit "formal operational thought" in history and "concrete operational thought" in science, but his or her reasoning may exhibit different stages within one subject area. Although Piaget (1972) explained this in terms of the concept of decalage, Biggs and Collis (1982) suggest that "it is common in the classroom situation that it become the rule" (p. 20).

Second, Piagetian stage theory fails to account for the affective component (Gallatin, 1985). And yet, how can we explain the difficulty Middleton's subjects had when they tried to adopt the perspective of a disliked national? Or Connell's young subjects when they became embroiled in the "triangle of nationalism, anticommunism, and the threat schema"?

Although Piaget and Kohlberg's stage theories have provided valuable frameworks for understanding political thinking, their limitations should also be recognized. Some scholars have turned their attention to information-processing theory; political theorists are just beginning to grasp the implications of the theory for policy thinking. The central concept associated with the theory is "schema," defined as "a cognitive structure which organizes previously acquired and newly received information; which has an impact on remembering and retrieving information and using it for solving problems; which may be related to attitudes" (Torney-Purta, 1988, p. 34). For example, a person may have a "poverty schema," which includes the Great Depression, unemployment, and soup kitchens. His or her schema is based on prior experience, both cognitive and affective.

Researchers interested in political

cognition have applied the theory to the study of adult political beliefs and policy thinking (Conover & Feldman, 1984; Lau & Sears, 1986). Torney-Purta (1988) has studied adolescents' approaches to political problem solving using a similar approach. In her study, students were given the following problem:

> Imagine you are the finance minister of a developing country. The interest payment on your debt to banks in the industrialized countries is due, but there is not enough money in your treasury to pay this debt. What would you do to solve this problem? Just think aloud and say whatever comes to your mind about how you would solve this problem.

Student responses were diagrammed to show individual's schemata both before and after a two-week summer institute. The graphic representations suggest a more complex approach to the problem after the institute.

Information-processing theory will not provide the answers to all of our questions about the way in which individuals think about political issues. Like the stage theories discussed in this review, information-processing theory has limitations when applied to the study of policy thinking (Haste, 1986). At the same time, it offers a different perspective for those interested in the development of policy thought among adolescents.

These are but a few of the questions that point toward the large gaps in our understanding of the development of policy thought. The need for further research is readily apparent. The capacity of the individuals in a society to examine policy issues, to consider causes and effects, and to suggest alternatives and consequences, determines to a large extent the quality and future of the global environment.

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Footnotes

[1] In a later study, Piaget (1972) stressed the role of interest in adolescence and adulthood, indicating that formal operational thinking skills may be more content-bound than those of the other three developmental stages.

[2] It is recognized that individuals can, and increasingly do, express their beliefs through nongovernmental agencies, such as Amnesty International, the Red Cross, etc., as well as through group actions such as boycotts. These actions often affect the shape of foreign policy decision making at the systems level. It is suggested here only that there is no *formal, institutionalized* means by which to influence international decision makers at the global system level.

[3] The sample of the remaining study was composed of male students.

[4] Wingfield and Haste (1987) suggest that males and females tend to *approach* political issues from different perspectives--males from a "separateness orientation" and females from a "connectedness orientation."

Table 1

Policy Thinking: The Qualitative Studies

Study	Sample	Major Conclusions
Adelson, 1971	450 British, West German, and U.S. adolescents, ages 11-18	Thinking about law and policy gradually proceeded from an individualistic, substantive approach to a sociocentric, principled mode of reasoning. Developmental trends were more evident than were national differences.
Connell, 1971	119 Australian children, ages 5-16	Although political information is mediated by adults, children appeared to interpret the political sphere for themselves. The child's political imagination seemed to be constrained by nationalism, anti-communism, and fear.
Crain & Crain, 1974	54 white males, ages 8, 11, 16	Children's conceptions of society supported a developmental interpretation. A small number of 16-year-olds demonstrated a commitment to democratic principles.
Crain & Crain, 1976	54 white males, ages 8, 11, 16; 61 white males and females, ages 6-16.	Children's approaches to policy questions involving dissent, voting, and the distribution of resources suggest a developmental framework.
Gallatin, 1985	453 Detroit students, approximately 50% white and 50% black, grades 6, 8, 10, 12	Generalizations from Adelson's (1971) study supported. Racial differences quite modest; national differences greater than racial variations, and developmental trends much more significant than either race or nationality.
Quarter, 1984	65 Israeli youth, Ages 7, 12, 16, 20	Reasoning about quasi-political issues develops from the concrete to the abstract, from the absolute to the pragmatic. Although cultural values influence policy thinking, responses support a developmental interpretation.
Torney & Brice, 1979	30 students, grades 4, 6, 8	Children's orientations toward issues of rights supported the Piagetian framework. However, the U. S. Constitution was often the ideal standard for judging adherence to human rights.
Stevens, 1982	800 English children, ages 7-11	Children who participated in small group discussions demonstrated moderately sophisticated political reasoning. The discussion format appeared to facilitate policy thinking.

Table 2

Policy Thinking and Formal Operational Thought

Study	Sample	Major Conclusions
Furth & McConville, 1981	72 adolescents, ages 12-19	When confronted with policy dilemmas, older students are more likely to acknowledge various perspectives and to suggest compromise solutions.
Middleton, Tajfel & Johnson, 1970	96 British children, ages 7, 9, 11	Children's ability to adopt the point of view of foreign persons was related to their attitude toward the nations. The ability to take the perspective of a disliked national was positively related to age.
Merelman, 1971; 1973	40 adolescents, grades 8 and 12	Few differences between 8th and 12th graders' policy thinking were noted. Students with higher political interest tended to demonstrate more structured, consistent policy thought.
Merelman & McCabe, 1974	118 youth, ages 11-12 and 17-18	The use of formal, principled criteria for deciding policy problems appeared to be related to age, cognitive development, political interest, and specific issues.
Johnston, 1983	523 youth, grades 4-12	An impulsive approach to foreign policy dilemmas was inversely related to age, grade level, IQ and politicization.

Table 3

Policy Thinking and Other Developmental Stages/Theories

Study	Sample	Major Conclusions
Harmon, 1973	84 youth, ages 10, 13, 16	Results indicated a strong relationship between political and moral reasoning.
Lockwood, 1975; Endo, 1973/1974	60 students, ages 12-13; 16-17	There was a significant correlation between stage of moral reasoning and public policy judgment. The perception of self-interest was negatively related to the use of higher level reasoning.
Kuhn, Langer, Kohlberg & Haan, 1977	162 persons, 10-50 years old	A developmental sequence--from logical concept to social concept to moral judgment--was suggested.
Patterson, 1979	55 students, ages 9-12	Reasoning about free speech issues was significantly associated with level of cognitive moral reasoning.
Eyler, 1980	135 college freshmen and sophomores	There was a significant positive relationship between cognitive moral development and the application of democratic norms in specific situations.
Lonky, Reihman & Serlin, 1981	287 students, ranging from eighth grade to college sophomores	There was a significant relationships between the level of moral reasoning and consistency between general and specific sociopolitical value statements, including such values as minority rights, civil liberties and equality of opportunity.
Breslin, 1982	1006 students from Northern Ireland and the Irish Republic, 17 years of age.	Reasoning about public policy issues was significantly associated with level of cognitive moral reasoning.
Lonky, 1983	81 college sophomores	Logical concept development was a necessary but insufficient basis for the development of policy reasoning.
Wingfield & Haste, 1987	9 males and 9 females, ages 12-16	Approaches to political issues can be characterized by either a "connectedness" or a "separateness" orientation. Orientation is strongly related to gender.

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